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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,377	02/27/2004	Hiroataka Matsumoto	016907-1606	7940

22428 7590 09/14/2005

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EXAMINER


WALSH, RYAN D

ART UNIT PAPER NUMBER

2852

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/787,377	Applicant(s) MATSUMOTO, HIROTAKA	
	Examiner Ryan D. Walsh	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/27/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1 and 8 are objected to because of the following informalities:

Regarding claim 1, the word "locates" in line 3, should be changed to located.

Regarding claim 8, "when the heating member composed of the first heating member and the second heating member is recovered stepwise" is unclear. The underlined text does not state what is recovered stepwise. The examiner will examine the claim as if it is the "fixing temperature" that is being recovered. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamimura (US Pub. 2004/0086292).

Regarding claim 1, Kamimura teaches, "An image forming apparatus comprising: a heating member which includes a first region and a second region (10): the second region locates in a predetermined position in the axial direction with respect to the first region (Inside of 10); a heating unit (11 and 12) which is provided inside the heating

member and which includes at least one of a first heating member (11) for heating the first region and a second heating member (12) for heating the second region; a main control unit (20) which carries out at least a first control mode and a second control mode; the first control mode (temperature drop control mode) which performs control to drop the temperatures in the first and second regions from a fixing temperature by a predetermined temperature, with specific timing at least once, while an image formation is being executed at the fixing temperature ([0031] & [0032]); and the second control mode (lamp OFF control mode) which turns off the first heating member and the second heating member with predetermined timing corresponding to the temperature supplied in the first control mode, when the image formation is completed (Figure 5)."

Regarding claim 2, Kamimura teaches, "wherein the timing with which the first heating member is turned off is shifted from the timing with which the second heating member is turned off in the second control mode (see Figure 5, 1st member is off before 2nd member)."

Regarding claim 3, Kamimura teaches, "further comprising: a third control mode (temperature recovery control mode) which is carried out by the main control unit and which returns the temperatures in the first and second regions to the fixing temperature stepwise when the temperatures in the first and second regions have been lowered from the fixing temperature in the first control mode after the main control unit image formation is completed ([0032] & [0033]), wherein the timing with which the temperature in the first region is recovered is shifted from the timing with which the temperature in the second region is recovered (see Figure 5, 1st member is off before 2nd member)."

Regarding claim 4, Kamimura teaches, "wherein the third control mode recovers the temperatures in the first and second regions with predetermined timing corresponding to the temperature dropped in the first control mode [0032]."

Regarding claim 5, Kamimura teaches, "A method of controlling a heating unit, comprising: when an image formation is executed at a first temperature, performing control to drop the temperature of a heating roller to a second temperature lower than the first temperature, with predetermined timing at least once ([0031] & [0032]); when the image formation is completed, turning off the heating member with predetermined timing corresponding to the second temperature lowered from the first temperature ([0031] & [0032]); and after the image formation is completed, returning from the second temperature to the first temperature ([0032] & [0033])."

Regarding claim 6, Kamimura teaches, "wherein when the heating member composed of a first heating member and a second heating member is turned off, shifting the timing with which the first heating member is turned off from the timing with which the second heating member is turned off (Figure 5)."

Regarding claim 7, Kamimura teaches, "wherein the timing with which the first and second heating members are turned off is determined by the second temperature obtained in dropping from the first temperature (Figure 5 and [0031] & [0032])."

Regarding claim 8, Kamimura teaches, "wherein when the heating member composed of the first heating member and the second heating member is recovered stepwise ([0032] & [0033]), shifting the timing with which the temperature in a first

region heated by the first heating member rises from the timing with which the temperature in a second region heated by the second heating member rises (Figure 5)."

Regarding claim 9, Kamimura teaches, "wherein the timing with which the first and second regions are raised is determined by the second temperature obtained in dropping from the first temperature [0032]."

Regarding claim 10, Kamimura teaches, "An image forming apparatus comprising: heating means (11 and 12) for heating a heating member; dropping means ([0031] & [0032]) for dropping the heating member kept at a first temperature to a second temperature lower than the first temperature with predetermined timing; OFF means for turning off the heating member according to the second temperature ([0031], [0032] & [0033]); and recovering means for returning the heating member kept at the second temperature to the first temperature with predetermined timing ([0032], Ln. 5-10)."

Regarding claim 12, Kamimura teaches, "wherein the timing with which the first and second heating member are turned off is determined by the second temperature obtained when the dropping means drops the temperature from the first temperature ([0031] & [0032])."

Regarding claim 14, Kamimura teaches, "wherein the timing with which the temperatures in the first and second regions are raised is determined by the second temperature obtained when the dropping means drops the temperature from the first temperature ([0031] & [0032])."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamimura (US Pub. 2004/0086292) in view of Kinouchi et al. (US Pub. 2003/0215255).

Regarding claim 11, Kamimura teaches, "the OFF means shifts the timing with which the first heating member is turned off from the timing with which the second heating member is turned off, when the heating member composed of the first heating member and the second heating member is turned off (Figure 5)." Kamimura fails to teach "the heating means includes a first heating member which heats a first region (center) and a second heating member which heats a second region (end)." However, the heating means includes a first heating member which heats a first region (center) and a second heating member which heats a second region (end) is routine in the art as shown by Kinouchi et al. (see 11a and 11b). It would have been obvious to one skilled in the art at the time the invention was made to modify Kamimura et al to include a first heating member which heats a first region (center) and a second heating member which heats a second region (end).

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The ordinary artisan would have been motivated to modify Kamimura's invention for at least the purpose of heating a fixing roller evenly over the entire surface, including both ends.

Regarding claim 13, Kamimura teaches, "the recovering means shifts the timing with which the temperature in the first region is raised from the timing with which the temperature in the second region is raised ([0031] & [0032])." Kamimura fails to teach, the heating means includes a first heating member which heats a first region (center) and a second heating member which heats a second region (end)." However, having a first heating member which heats a first region (center) and a second heating member which heats a second region (end) is routine in the art as shown by Kinouchi et al. (see 11a and 11b). It would have been obvious to one skilled in the art at the time the invention was made to modify Kamimura et al to include a first heating member which heats a first region (center) and a second heating member which heats a second region (end).

The ordinary artisan would have been motivated to modify Kamimura's invention for at least the purpose of heating a fixing roller evenly over the entire surface, including both ends.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Endo et al. (US Pat. 5,512,993) and Tanaka (US Pub. 2004/0165904).

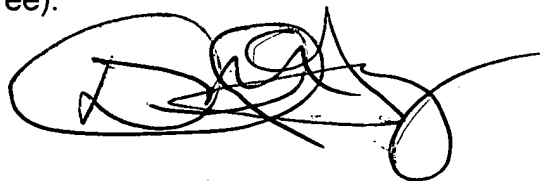
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Walsh whose telephone number is 571-272-2726. The examiner can normally be reached on M-F 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan D. Walsh
Patent Examiner
Art Unit 2852

A handwritten signature in black ink, appearing to read 'David Gray', with a large, stylized flourish extending to the right.

David Gray
Primary Examiner